



Collider-Accelerator Department Worker Occupational Safety and Health Committee

Date: June 14, 2004

To: WOSH Committee and Guests

From: P. Sparrow, A. Piper

Subject: Minutes for 6/7/04 - WOSH Committee Meeting

Members: L. Ahrens*, M. Bannon*, J. Beebewang*, J. Benante*, J. Carlson*, R. Conte, J. Cupolo*, D. Derryberry*, T. Dilgen, F. Dusek*, J. Guercio, E. Koropsak, J. Laster, D. Lazarus, C. Liaw, D. Meany, B. Mullany, J. Nicolellis, A. Piper*, S. Pontieri*, M. Sardzinski*, W. Shaffer, T. Shrey*, L. Snyderstrup, P. Sparrow, D. Steski, L. Vogt*, D. Weiss*, R. Zapasek*.

(* denotes not in attendance)

Guests: E. Lessard, R. Karol

P. Sparrow provided the introduction to this meeting by identifying the proposed agenda and respective speakers.

E. Lessard reviewed lessons learned from the recent copper theft incident and related security measures and objectives to be implemented inclusive of:

1. Theft statistics following the copper theft incident*
2. Initial C-AD security improvements*
3. FY 04 Security action items*
4. Security objectives for C-AD*

E. Lessard reviewed a recent safety issue involving manpower requirements for experimental runs at NSRL*

R. Karol reviewed the performance indicators for the C-A Department for the first quarter of CY04*

A. Piper reviewed the action items from the previous WOSH quarterly meeting and the status of each.

Closing Meeting Comments:

1. W. Shaffer requested improved communication regarding security breaches for C-AD building managers and their alternates.

* Please see attached slides

Copy to:

Hauser, J
Karol, R.
Kirk, T.
Lessard, E.
Lowenstein, D.
McNerney, A.
Passarello, D.
Pile, P
Roser, T
Sandberg, J.
Tuozzolo, J.
WOSH Committee Members

Lessons Learned from Copper Incident

Prepared by
Ed Lessard

Collider-Accelerator Department
June 7, 2004

C-AD Theft Statistics Following FY03 Cu Conductor Theft at B912

- **Possible identity theft**
- **Unsecured copper storage area at B919**
- **Theft of 20 ft. extension ladder at B930**
- **Tools stolen from government vehicle**
- **Tools stolen from government vehicle**
- **5000 ft roll of copper tubing at B1006B**
- **Copper scrap from scrap bin at B930**
- **Copper blocks from B936**

Initial C-AD Security Improvements

- Work plan developed to address securing of materials
- Identified all areas containing valuable materials
- All valuable materials stored in locked compounds
- Instituted tighter Compound and Rigging equipment key controls
- Increased human surveillance
- Updated theft reporting protocol to include notification of ALD
- Publicized news of thefts
- Developed inventory control program with BNL Business Systems

FY 04 Security Action Items

- Green Work Permit changed to address security issues
- Work-planning screening guidance updated (OPM 2.28.d)
- C-A is color-coding valuable radioactive materials as they are removed from service
- NSRL and certain MCR areas require BNL ID card for access
- PPM investigating use of imbedded anti-theft devices
- Cameras and motion detectors are being installed in certain C-AD storage areas (B918 and B922 for example)
- OPM 1.20, C-A Policy for Valuable Materials Security
- OPM 2.32, Access Controls - Building 911 and 1005 Property Protection Areas

FY04 Security Objectives for C-AD

- Reduce theft incidents to zero
- Inform WOSH Committee during quarterly meetings
- Improve information security
- Continue to improve physical security

Recent Safety Issue

A meeting was held to discuss the CAS watch manpower level for the NSRL run.

- CAS personnel concerns:
 - Two equally trained and experienced personnel check each other to ensure unsafe acts are not committed
 - The Biology experiments and the MCR put a lot of pressure on CAS to get the systems back on. They feel pressure to do jobs that should be done by two personnel.
 - Training should be enhanced especially for modified systems, so that CAS personnel can better respond to problems.
 - Management should communicate a better understanding of what tasks require two men.
- The following was decided by C-AD management:
 - We will support 2 men for Biology running only. This will be accomplished by having a man available during the days and providing OT during evening runs. Physics runs, lock out and turn on will continue with one man.
 - Ed Lessard and Ray Karol will work with the CAS Supervisor to set up a system where experts formally define changes to their systems, similar to new systems.
 - Bill Anderson will work with CAS personnel to define jobs they believe should be done with 2 men.



Collider- Accelerator Department
Building 911A – P.O. Box 5000
Upton, NY 11973-5000
Phone 631 344 5636
Fax 631 344 5676
cirm@bnl.gov

managed by Brookhaven Science Associates
for the U.S. Department of Energy

Memo

Date: April 19, 2004
To: Distribution
From: Peter Cirnigliaro
Subject: Performance Indicators For C-A Department For The First Quarter of CY04

The following quarterly performance indicators are distributed to all C-AD managers, supervisors and workers. If you have specific questions about the data, please contact Ray Karol, Ed Lessard or myself.

The collective dose (4.4 person-rem) indicated in Table 1 is for CY03. This collective dose was significantly less than the collective-dose goal. This was primarily a result of two factors. First, the lack of a high-intensity proton program, which has allowed residual radioactivity to decay, and second, only two of the five high-dose maintenance jobs scheduled for the FY03 summer shut down were performed.

There were five critiques of events at C-AD in the first quarter, see Table 4, and two of these events were categorized as DOE reportable occurrences, see Table 5. All these events involved non-C-AD workers. They show that the Department must continue to improve work planning when personnel from other organizations are involved.

As seen in Table 1, an unusual number of injuries were experienced this quarter. There were four Recordable Injury Cases, two Lost Work Cases, and one First-Aid Case. The Department Chair has set the goal of zero injuries. The working premise for the Department is that all injuries can be prevented. Management and worker compensation evaluations will be affected by safety performance, including recognizing success when it occurs. A semi-annual recognition and luncheon for a perfect safety record will be held to recognize C-AD Groups that have achieved the zero goal for the prior 6 months. Additionally, Division Heads have been asked to increase worker participation in weekly safety discussions. C-AD upper management will be regularly visiting and participating in these discussions throughout the year, and the Associate Chair for ESHQ will be increasing worker participation in injury investigations, safety committees, and OHSAS 18001 job-risk assessments.

TABLE 1, C-A DEPARTMENT PERFORMANCE INDICATORS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1-1-04 to 3-31-04
<u>Whole-Body Collective Dose (person-rem)</u>	25	27	48	82	85	39	43.8	12.2	13.3	11.1	21.9	3.8 ¹	4.4¹
Skin and Clothing Contaminations	0	0	0	0	0	0	1	0	0	0	1	0	0
Internal Contamination	0	0	0	4	0	0	0	0	0	0	0	0	0
Radioactive/Hazardous Materials Overexposures	0	0	0	0	0	0	0	0	0	0	0	0	0
Lost Work Day Case Rate (# per 100 FTEs)	2.9	2.2	1.5	2.1	1.2	1.2	3.4	2.2	0.8	0.23	1.16	0.49	2.09
1. Cases	11	8	5	7	4	4	12	8	4	1	5	2	2
2. Total Hours Worked (1000s)	773	741	651	674	666	663	700	741	995	867	864	821	191
Recordable Injury/Illness Rate (# per 100 FTEs)	5.4	4.1	4.9	4.2	2.4	3.3	4.8	3.0	1.2	1.61	2.08	1.21	4.18
1. Cases	21	15	16	14	8	11	17	11	6	7	9	5	4
First Aid Cases Excluding Athletic Injuries	-	-	-	-	-	-	-	-	17	16	19	12	1
Unplanned Safety Function Actuations	1	3	1	0	0	0	0	0	0	0	0	0	0
Violations of Operating Procedures	0	0	3	1	0	0	0	0	0	0	0	0	0
Unplanned Shutdowns	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>Occurrences</u>	4	10	7	5	4	3	4	1	0	2	1	2	2
Occurrences With Open Corrective Actions	1	2	1	1	0	1	1	1	0	2	0	0	0
Environmental Related Occurrences	2	4	3	1	1	0	1	0	0	0	0	0	0
Solid Low-Level Waste Shipped													
1. Radioactive Waste (cu-ft)	6354	2089	1742	2543	7018	6642	1494	624	1642	2719	1624	2578	408
2. Hazardous Waste (cu-ft)**	16	6.0	47	26	24	51	14.5	16.1	91.4	32.4	105	69.5	6.7
3. Mixed Waste (cu-ft)**	4	140	39	6.8	38	117	0	18.75	40.3	21.6	1400	53.2	0
4. Industrial Waste (cu-ft)**	-	-	-	-	-	-	-	179.4	220.4	445.5	42135	919.5	183

** Assumes 64 lbs./ft³.

1- Dose shown is for CY03

TABLE 2, C-A OSHA-TYPE DEFICIENCIES FOUND DURING TIER 1 INSPECTIONS

OSH Category	Definition of Category	Number of Deficiencies For 1998	Number of Deficiencies For 1999	Number of Deficiencies For 2000	Number of Deficiencies For 2001	Number of Deficiencies For 2002	Number of Deficiencies For 2003	Number of Deficiencies For 1-1-04 to 3-31-04
General Safety	Inadequate lighting, inadequate aisle-ways, trip hazards in walkway, load ratings not posted, missing floor or ceiling tiles, broken hardware on doors, windows or machines, exposed building insulation, overdue inspection on cranes, hoists and elevators, lack of toe-boards or improper railings.	154	89	170	56	51	56	21
Electrical Safety	Inadequate breaker panel labels, exposed conductors, missing grounds, GFCI not used where needed, knockouts missing on breaker boxes and disconnects, blocked breaker boxes or blocked disconnects.	82	60	96	61	78	70	38
Housekeeping	Poorly organized areas, excessive fire loading from boxes, plastic and packing materials or storage on top of cabinets.	37	22	41	25	25	21	7
Chemical Safety	Improper gas-cylinder storage, improperly labeled or unlabeled hazardous materials, improper storage of hazardous materials.	36	34	71	23	43	33	11
Fire Protection / Life Safety	Excessive storage of flammables, blocked exits, missing or non-functioning exit sign, damaged or broken fire protection / fire detection systems, or overdue extinguisher inspections.	73	38	16	20	41	49	17
Working Environment	Evidence of smoking or eating in work areas where prohibited, inadequate lighting or ventilation, heat stress, high noise and no posting or ear protection where required.	0	0	0	24	66	50	20
Radiation Safety	Survey instruments out of calibration, radiation barriers or other controls in poor condition or poorly maintained posting.	1	6	12	7	10	12	0
Personnel Protection	Broken machine guards, not wearing personal protective equipment when required; for example, lack of safety glasses.	31	25	36	10	12	12	7
Unsafe Practices	Using broken or damaged tools or ladders, parking in no-parking areas, going the wrong way down one-way streets, not wearing a TLD badge or dosimeter when required, climbing without fall protection, failure to tie down ladders, or using cable tray for climbing.	0	1	1	1	0	0	0
Outside & Grounds	Overgrown walkways, dilapidated or poorly maintained walkways and improper storage outdoors.	4	2	4	6	4	11	1
Other	Leaking containers or piping, improper air emissions, unlabeled sinks, unlabeled containers, improperly controlled satellite areas for waste.	1	4	2	5	13	5	2

TABLE 3,
COMPLETION PERCENTAGE OF REQUIRED TRAINING FOR C-A EMPLOYEES

Time Period	Number of Requirements	Total Incomplete	Percent of Required Training Complete
Q4 CY 99	5236	1036	80
Q1 CY 00	4530	1233	73
Q2 CY 00	4757	913	81
Q3 CY 00	4754	241	95
Q4 CY 00	5174	531	90 (CY00 Average = 85%)
Q1 CY 01	5814	534	91
Q2 CY 01	5782	190	97
Q3 CY 01	5837	161	97
Q4 CY 01	6639	379	94 (CY01 Average = 95%)
Q1 CY 02	6859	236	97
Q2 CY 02	6980	148	97
Q3CY 02	7016	170	98
Q4CY 02	7196	233	97 (CY 02 Average = 97%)
Q1CY 03	7235	283	96
Q2CY03	7232	278	96
Q3CY03	7255	331	95
Q4CY03	7650	287	96 (CY 03 Average = 96%)
Q1CY04	8044	64	99

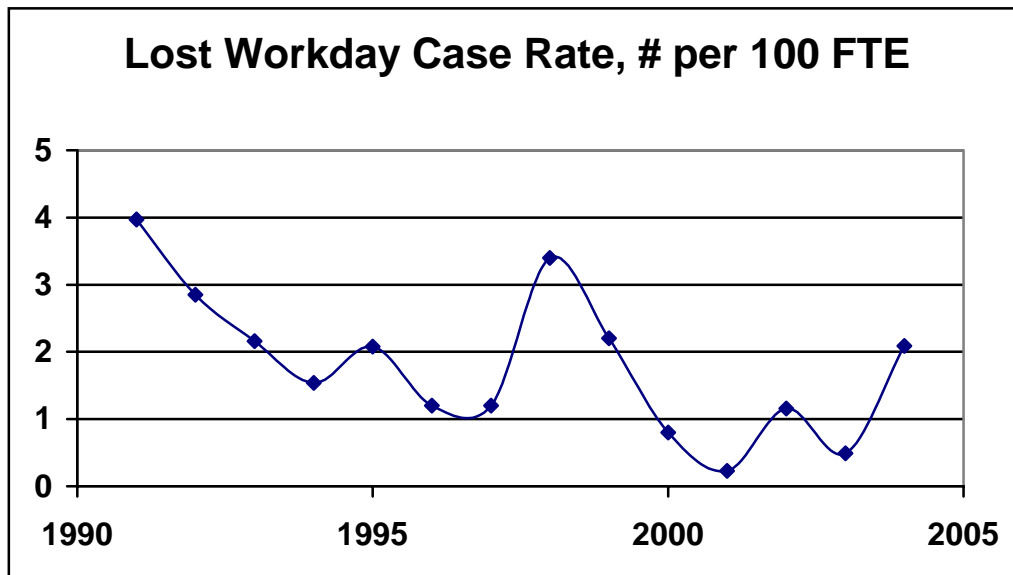
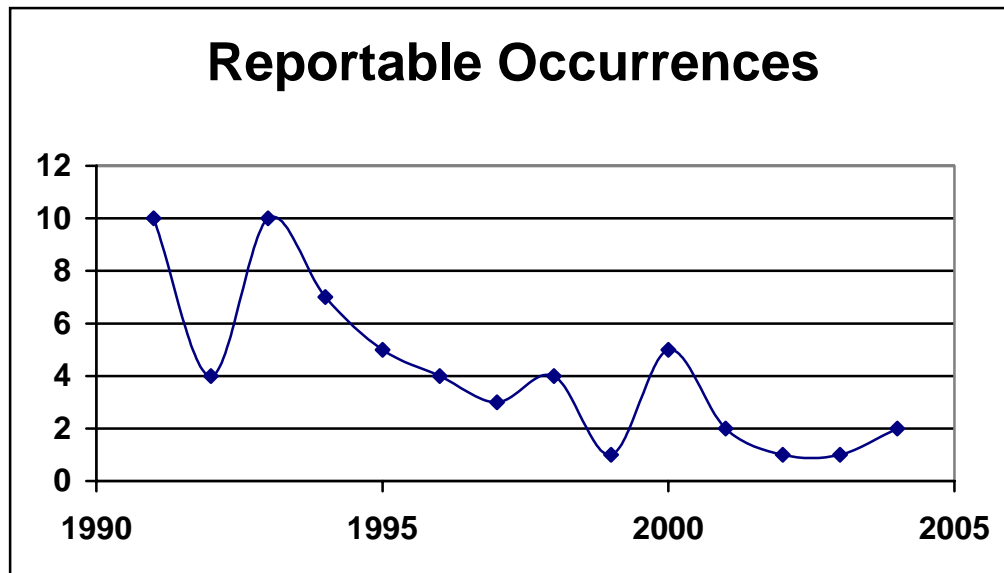
TABLE 4,
CY04 CRITIQUES OF C-AD EVENTS

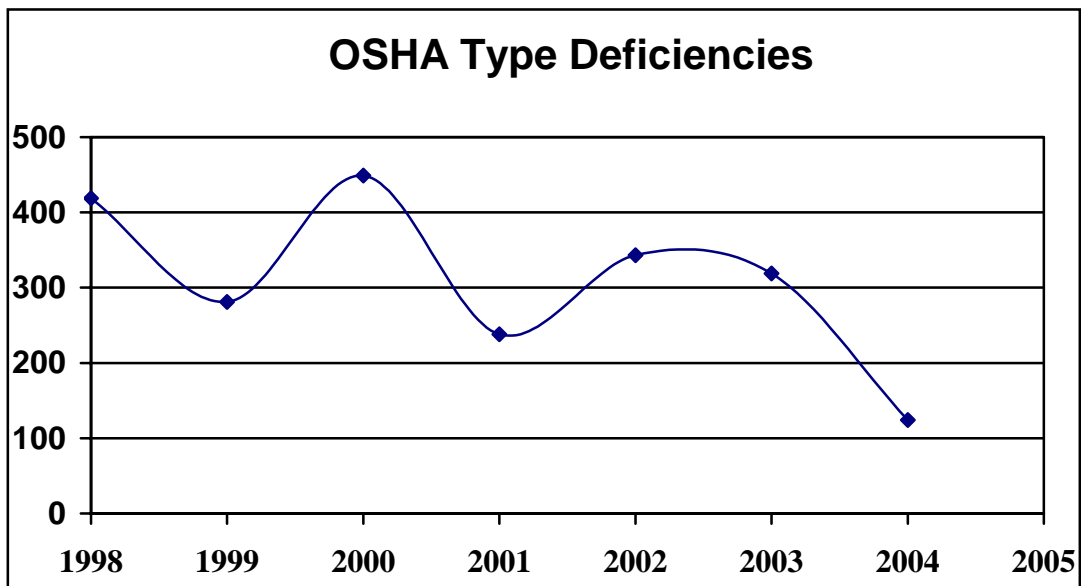
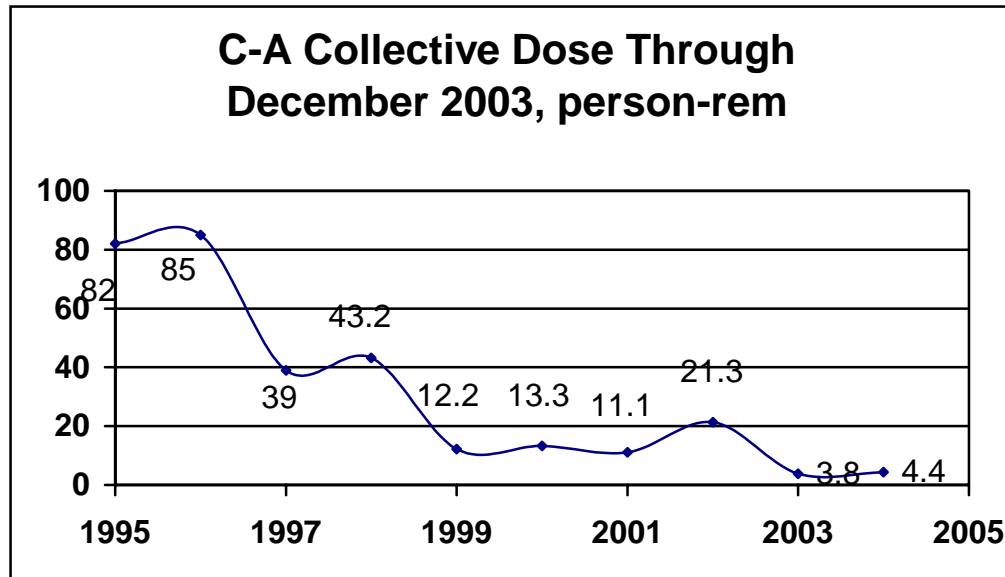
<u>Worker Injures Ankle After Slipping on Walking Surface, 1-23-04</u>
<u>Ground Fault Due to Inadequate Clearance for Wiring, 3-09-04</u>
<u>Welder's Helper Injures Eyes, 3-24-04</u>
<u>Load Falls Off Truck During Transport, 3-27-04</u>
<u>Anomaly at NSRL During Access, 4-14-04</u>

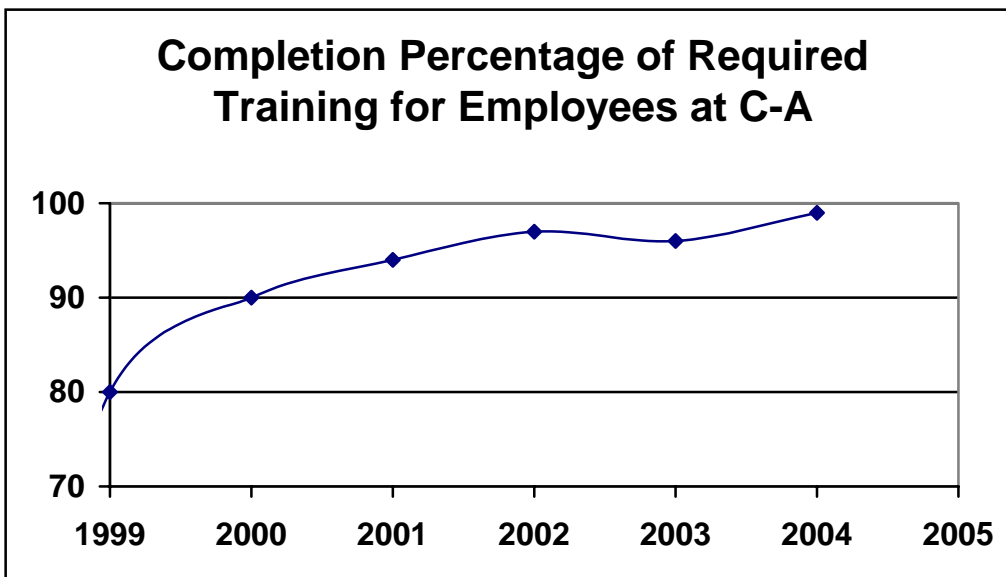
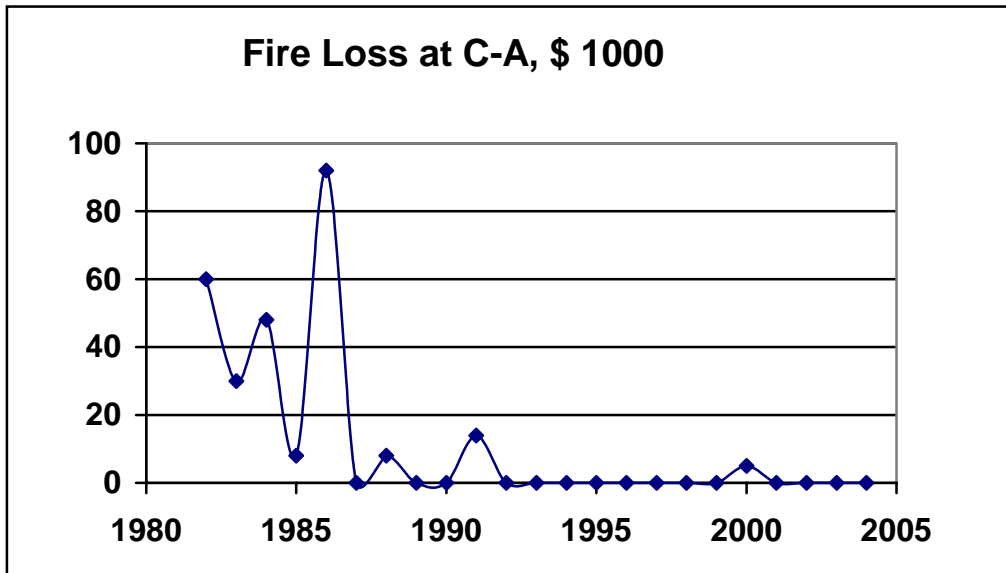
TABLE 5,
CY04 C-AD REPORTABLE OCCURRENCES

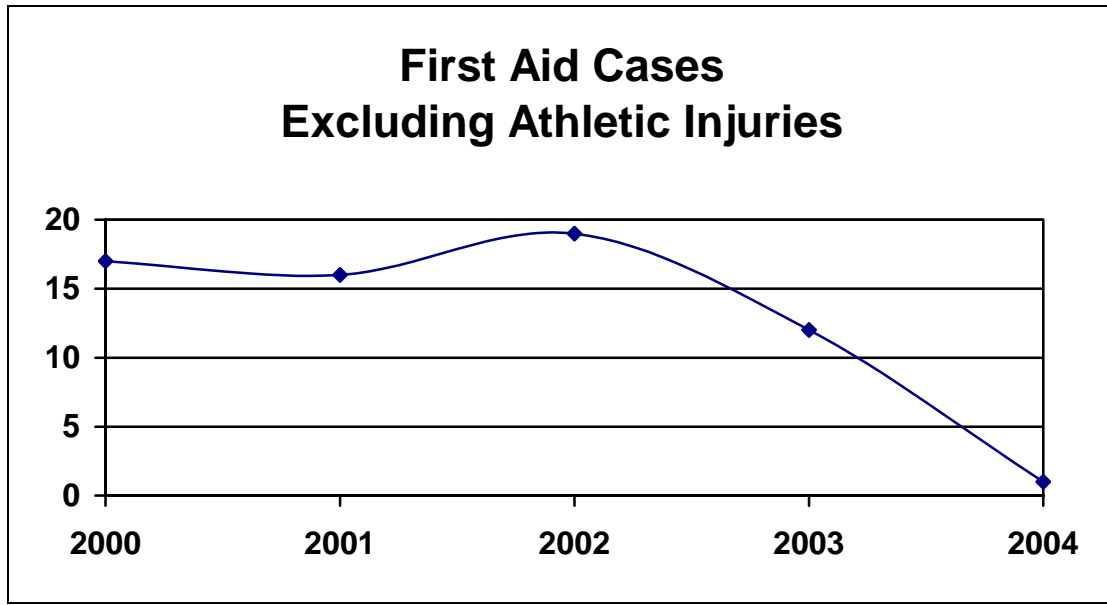
<u>Transformer Dropped During Rigging (occurred 12-30-03, reported in CY04)</u>
<u>2004, Worker Injures Ankle Preparing for Cable Pull</u>
<u>2004, Load Falls Off Truck During Transport</u>

SELECTED GRAPHS OF PERFORMANCE INDICATORS









Distribution:

C-A Department

Bebon, M.
Chaudhari, P.
Goode, G.
Hoey, S.
Kelley, P.
Kirk, T.
McNerney, A.
Schaefer, C.
Tarpinian, J.
Williams, P.